potential marker for monitoring patients with CHF and predicting their outcome.

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IMAGES IN CARDIOLOGY

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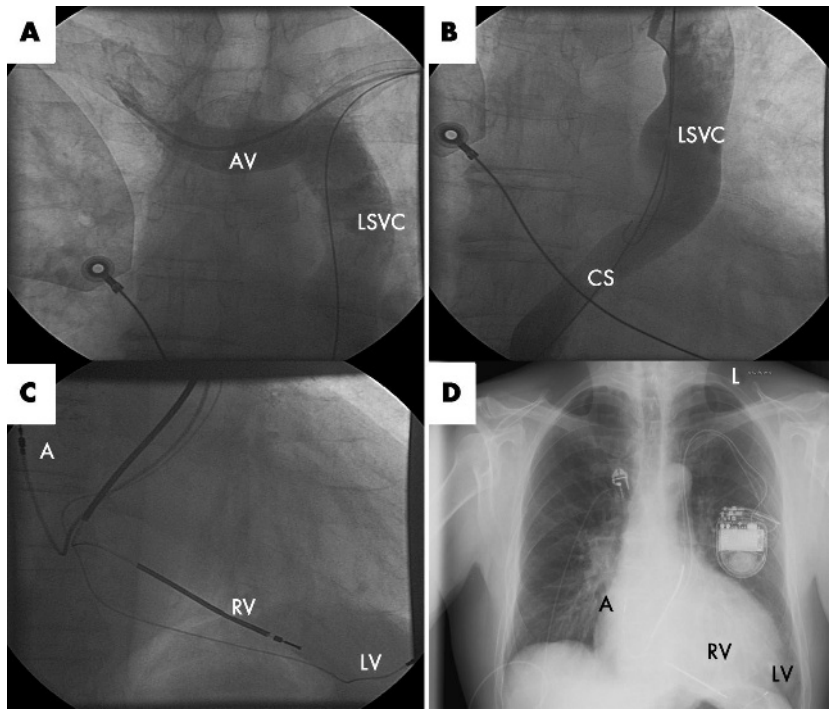
Implantation of a biventricular defibrillator system in a patient with persistent left and absent right superior vena cava

A 61-year-old man with a previous myocardial infarction experienced heart failure symptoms (New York Heart Association functional class III). An echocardiogram revealed a severely impaired left ventricular ejection fraction (15%) under optimal medical treatment. Since he also showed a complete left bundle branch block and pronounced dyssynchrony on echocardiography he was referred for implantation of a biventricular implantable cardioverter-defibrillator (ICD) system.

After access to the left subclavian vein, a persistent left superior vena cava (LSVC) was encountered. Subsequently, a venogram also revealed the absence of a right superior vena cava (panel A: AV, anonymous vein). The persistent LSCV drained into the notably enlarged coronary sinus (CS, panel B). Therefore, all three leads had to be implanted through the coronary sinus. The proximal shock coil was located within the coronary sinus. The left ventricular electrode (LV) had to be implanted through the posterior cardiac vein and could be positioned at a favourable position in a lateral branch (panel C: A, atrial lead in the right atrial appendage; RV, right ventricular defibrillation lead; panel D: *x* ray with the successfully implanted cardiac resynchronisation therapy-defibrillator system). The patient could be successfully defibrillated with 12 J and experienced significant improvement in heart failure symptoms briefly after the initiation of biventricular pacing. The persistence of the left superior vena cava is the most commonly encountered congenital anomaly of the venous system with a prevalence of 0.3–1%. This



case illustrates the feasibility of successfully implanting a biventricular ICD system through a persistent left superior vena cava and the coronary sinus.

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